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Case report

Treatment difficulties of malignant esophagorespiratory fistula: Case report of a 56-year-old patient with esophageal cancer

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ABSTRACT

Introduction: An esophagorespiratory fistula (ERF) is a lethal complication of advanced esophageal cancer. The preferred treatment method is placing a self-expanding stent, which is expected to decrease the risk of life-threatening complications.
Aim: In the case study we present a patient with esophageal cancer complicated with the presence of ERF, pneumonia, lung abscess and severe malnutrition.
Case study: A 56-year old man was hospitalized due to short syncope, dyspnea and cough. Cachexia was apparent. Immediate diagnostics with chest X-ray, bronchoscopy, gastroscopy and computed tomography (CT) of the chest revealed esophageal cancer and presence of ERF with respiratory complications. Endoscopic stent placement significantly decreased the initial symptoms. The patient was later re-admitted due to recurrent respiratory infections, dysphagia and progressing cachexia. He required stent placement again, parenteral alimentation and prolonged antibiotic therapy. From the diagnosis he survived 28 weeks.
Results and discussion: The average survival of patients with diagnosed ERF is about 8 weeks. The palliative treatment is expected to reduce bronchial aspirations and to prevent dysphagia. The recommended method is the insertion of esophageal stent to unblock the gastrointestinal tract and to close the fistula simultaneously. Reopening of the ERF is a severe complication caused mostly by progressing neoplasm. Successful surgical treatment of primary or recurrent fistulas is only probable in patients with good or moderate performance status.

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Conclusions: An immediate implementation of diagnostic and therapeutic methods is necessary, as the time to diagnosis and treatment of a malignant fistula strongly influences the patient's survival and quality of life.

1. Introduction

About 450 000 new cases of esophageal cancer are registered in the world each year. The most frequent squamous-cell carcinoma (SCC) and adenocarcinoma stand for about 90% of malignant neoplasms in this location and in about 80% of cases, males aged above 40 are involved.[1] The risk factors are: smoking, alcohol abuse, lower social status, radiotherapy of the mediastinal area or corrosive burns of the esophagus in the past, persistent gastroesophageal reflux or head and neck tumor in the medical history.[2] In most patients esophageal cancer at the time of diagnosis is already in an advanced stage and excludes radical treatment. The patients undergo palliative treatment with the aim of life comfort improvement and proper nourishing if esophageal stenosis occurs. The average survival from the diagnosis time-point is several months only.[3]

A severe complication of esophageal cancer is an esophagorespiratory fistula (ERF) that is observed in about 1%–22% of patients with active malignant esophageal disease and in less than 1% of patients with respiratory tract neoplasms. Due to the high probability of substance aspiration through an abnormal canal from the gastrointestinal into the respiratory tract, the patients often suffer from severe pneumonia, lung abscess or sepsis. The most frequent symptoms of the fistula are cough with fever and food intolerance that can be mistaken for dysphagia in course of esophageal stenosis. The autopsy data suggest higher rate of malignant fistulas than it is actually noted in living patients.[4,5] The high risk of lethal complications requires an immediate but prudent intervention. The former first choice method using plastic non-expandable esophageal stents was associated with a high rate of complications (in 15%–40%): perforations, hemorrhages, compressive necrosis, obturations and movement of the prosthesis beyond the area of its implantation. Recently it has been replaced by an endoscopic placement of a self-expanding stent that has higher effectiveness and lower rate of complications.[6]

2. Aim

In the case report we describe diagnostic and therapeutic difficulties regarding a 56-year-old patient with an advanced esophageal cancer where the ERF was already present at the time of the malignancy diagnosis.

3. Case study

A 56-year old man with a history of alcohol and cigarettes abusewas admitted to the internal medicine department due to a stomach pain, a short syncope without loss of consciousness and dyspnea. For several months he complained about weakness and loss of appetite, and for the preceding two weeks he suffered from vomiting and annoying cough about 30 min after each meal. Loss of 10 kg of weight was observed. In physical examination cachexia was apparent. The chest X-ray evoked a strong suspicion of a tumor in the right lung hilus (Fig. 1). An infiltration in the orifice to the middle lobe and a bronchoesophageal fistula in this area were found in bronchoscopy (Fig. 2). In gastroscopy an ulcerative infiltration starting at the 25th centimeter of esophagus was noted and additionally a clefty lumen at the 30th centimeter that periodically excreted some purulent contents (Fig. 3). In the specimen from the bronchial tree there were only inflammatory and necrotic changes observed, while in the esophageal ulceration cells of carcinoma planoepitheliale G2 were present. The chest CT scan confirmed an esophageal neoplasm in the form of a circular infiltration, spreading from the tracheal bifurcation level up to the level of lower pulmonary veins, with progression toward the mediastinum; additionally, right-sided pneumonia and a developing abscess (3 × 2 cm) in the 6th right lung segment could be observed; there was no direct fistula lumen between the bronchial and the gastrointestinal system

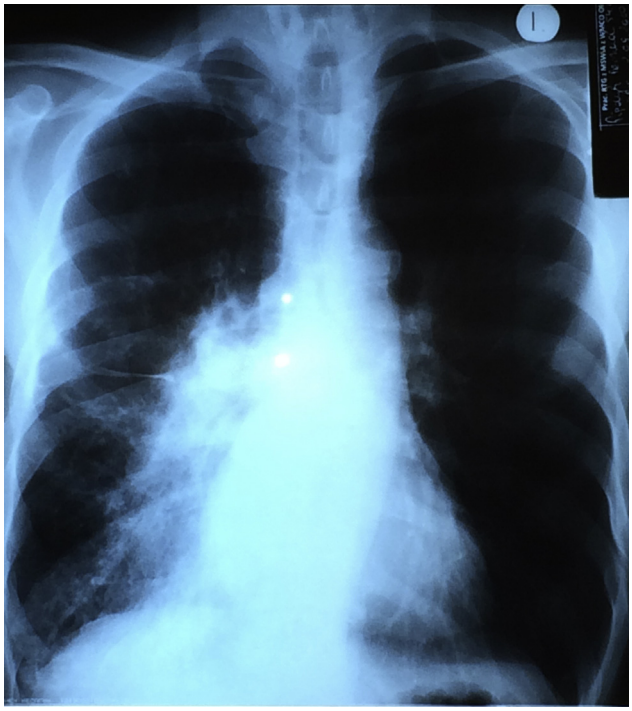

Fig. 1 – Chest X-ray. Suspicion of a tumor in the right lung hilus.